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Original.

THE ETIOLOGY OF INSANITY.*

BY R. C. F. COMBES, M. D.

Since the time when insanity was looked upon as the work of Satan and treated accordingly, it has been the effort of mankind to enlighten themselves as to the condition, and to-day there are comparatively few who do not believe that it is a disease, which under proper care and treatment can be cured in a certain proportion of cases. Of all of the essentials in the successful management of this disease, as with all others, the most important one is a correct idea as to its cause or causes. Many of our brightest men have devoted the best part of their lives to the study of this subject, and to my mind are partly in error. The physician, as well as the layman, often gives overwork, disappointment in love, loss of friends, etc., as causes of this disease. It is true that such reasons as given could act in a contributory manner, but certainly not as a primary cause. There is something deeper, as the one and primary cause of this disease, and while I will not claim that I have discovered anything new in particular on the subject, I do claim that I shall be able to correct an error which has existed in the minds of some of my professional brothers. I shall take some of the more prominent causes as given by most of our authors, and endeavor to show that they are not the true primary cause of the disease.

Heredity probably stands first on the list. I ask, what is this? As generally understood, it is a certain inherited taint or peculiarity of construction or arrangement of brain cells or neurons which are handed down from generation to generation. This theory I can hardly believe, because if it were true we would have in the disease a condition similar to dementia, imbecility, or idiocy, with defective reasoning powers, and the symptoms would continue without remission or intermission, and periods of excitement and agitation would be infrequent or wanting. We must keep in mind that insanity

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is very common with persons who have the brightest intellects, but by some means the action of the brain cells or neurons are interfered with and abnormal thoughts are substituted for normal ones; and as the very essence of the definition of the word insanity is an alienation from the normal, it is essential that a person must be comparatively normal before he can become insane. If a person inherits a mental defect such as idiocy he was never normal and can therefore never become insane. He can still have other mental defects, but not a true insanity. Next in prominence comes alcohol as a cause of this disease. This seems plausible, but as we have insanity without alcohol we must look further. We have still further an endless number of given causes which neither time nor space will permit me to mention. Of the causes as given above the first seems the most reasonable one, except that it gives a wrong impression.

In the place of saying that heredity is the cause of this disease we should say that such a person has inherited a weakness of, or inefficiency of, certain organs of the body. To my mind this defect is not located in the brain itself, but in some one of the other organs of the body, which, failing to properly perform their functions, thus fail to properly eliminate certain toxic elements from the blood which so act upon the brain cells or neurons as to cause them to retract when they should expand, or *vice versa*, and thus disarrange them so that they fail to properly perform their functions. For this reason I believe that toxic influences should take the position as the very first and most prominent and common cause of this dread disease.

We all know that this human body is a vast laboratory for the manufacture of poisons of all descriptions. We know that it produces urea, indican, acetone, diacetic and oxy-butric acids as well as many other articles. We know that it produces certain septic poisons, the effects of which are exhibited in certain forms of insanity, *e. g.*, the puerperal state and typhoid fever.

Under normal conditions we either do not manufacture or excrete all of these articles, and they give us no trouble; but we are not all so fortunate as to possess normal bodies and organs, and just here is where our inherited defects give trouble.

The man who has a sluggish liver suffers accordingly, and other organs which defects leave their trails of misery. I do not undertake to say which of the organs is the defective one which manufactures or fails to eliminate the article which is so disastrous as to produce insanity.

We all know that we produce urea and excrete it, and if the kidneys fail, know the one and only result. I have been led to this belief and have had my opinion strengthened more probably, from our ability to produce a similar train of symptoms to those of insanity by the administration of certain drugs, *e. g.*: If I wish to produce temporarily a case of acute mania, alcohol will do it, and will continue the symptoms as long as I keep up the stimulus; we have the elation, rapidly changing thoughts, hallucinations of sight and hearing, as well as the disturbance of other special senses. It is true, it does not affect all in the same

way; it may produce a stuporous condition, as met with in other forms of insanity. Again, by the administration of cannabis indica we can place a man in a veritable heaven and earthly bliss with rapid and changing thoughts and a flow of eloquence far from the normal. Again, large doses of nux vomica produce mental agitation and depression, feelings of impending danger and morbid fears of all kinds.

Bromides taken for a long time and in large doses first produce bromism, and if continued dementia. In other words, I produce a true insanity with this one potent drug. Take now the article cocaine and I will again produce a dementia of a slightly different character but well enough marked to state with a degree of certainty that it is a true dementia. Ergot, if long continued will so contract the involuntary muscular fibres of the coats of the arteries as to interfere with the nutrition of the brain tissue, and as a result we have a dementia, organic in nature. Absinthe, a preparation of alcohol produces similar results. Belladonna and chloral will both produce a similar condition if continued for a long time and in large doses. Mercury, lead and many other articles, which I have neither time nor space to mention, will produce similar results. By the administration of the different articles as enumerated above I cannot only produce acute but the chronic forms of insanity, and also the exacerbations of the disease, by increasing or decreasing the dose.

It seems to me that as these conditions can be so readily produced by the administration of articles from without, it is but logical to believe that a similar train of symptoms produced without them must be caused by articles of similar potential power, and that they must be produced within the body; and as we have no means of discontinuing the production or administration, the symptoms are continued.

I think we can account for the periods of excitement, agitation or depression from either the temporary inactivity of the excreting organs or the overactivity of the secreting organs at the time, *e. g.*: During sleep our organs are liable to be more sluggish than during the hours of wakefulness. This perhaps accounts for the extra depression of melancholiacs and the extraordinary number of morning suicides.

The toxic theory, I think, also accounts for the fact that the disease is more liable to occur at the critical periods of life, viz.: pubescence, adolescence, child birth, lactation, pregnancy, menopause, old age, etc.

As an explanation of the causes of various forms of insanity I have to submit that many poisons have a widely different effect upon one person from that of another; so with the particular poison which produces insanity; it affects one person differently from another, *e. g.*, in one person it produces a swelling or retraction of the protoplasmic prolongations of the neurons, as the case might be, and a consequent train of symptoms, and when an extra amount of poisonous stimulus is applied gives rise to periods of excitement or depression. In the prolonged forms of insanity such as paranoia, it would seem to me that such a condition is produced not by an excess of poison, but by its effects upon some particular set of cells.

As to the causes of the forms of insanity where there are coarse brain lesions or pathological conditions such as organic dementia, I believe that the continued action of the poison upon the cerebral tissues other than the brain cells so interferes with the nutrition as to cause them to break down and thus disarrange the cells. I further believe that this same poison or a similar one is the cause of many forms of disease of the nervous system, *e. g.*, sclerotic changes, epilepsy, tabes, etc.; but the poison attacks the cells or neurons in a different location.

In the special form of tissue degeneration in the brain known as general paresis, I believe that this poison (if not the same) is a very close relative to the specific one of syphilis, or is aided in its work by it, and in case this element affects certain parts of the brain or cord, we find mental symptoms almost wanting, but the disease claims the victim just the same.

I have seen, within the last two years, two well-marked cases of general paresis ending in death, with very few, if any, mental symptoms; this leads me to believe, that the same poison did the work, but that parts of the brain were involved which did not interfere with mental operations.

Abnormal thoughts are common in health under the influence of stimuli of many kinds, but do not remain after the physiological effects have passed away.

Certain persons can take alcohol almost *ad libitum* without producing an abnormal idea; others can go to sea without feeling any unpleasant sensation from the motion of the boat; in other words, one person has a power of toleration which is wanting in another, and so I claim that one person can manufacture enough poison to make another insane, but is able to carry it without effect. In all probability his tolerating powers are greater, or he has the power of eliminating it so that it has no bad effect, while the others suffer accordingly.

As to the production of certain forms of insanity by certain varieties of poisonous elements, it is only necessary for me to say that we are all familiar with the different effects produced by the same drug, if given to different people, and again the length of time to which one is subjected to the influence of a poison sometimes reverses its effect, *e. g.*: I now have a case on hand which when he first came to my attention, four years ago, was a true case of agitated melancholia, but is now just as decided a case of acute mania; he is elated, talkative and very decidedly happy. The old adage "Falling drops wear rocks" can well be applied here. A man can have a veritable fortress, so far as brain and nerve constitution is concerned, but if the drops continue to fall frequently enough and drop on the right place they cannot fail to do the damage, especially if the drops are from a great height and laden with something stronger than water.

Brain texture and neurons are delicate structures, and I wonder how they stand the many attacks which are made upon them.

Another error which the physician is liable to make in the study of cases of insanity is taking the result of a disease as its cause. *e. g.*: Masturbation or sodomy is frequently given as a cause of this disease. While it is true

that those evil habits act in a slight causative relation they are much more liable to be the result of the disease. In other words one may get the cart before the horse.

The late Prof. John C. Shaw vehemently denied that insanity was ever caused by masturbation, and it is my opinion, if insanity could be caused by masturbation primarily, a large majorty of the people of the world would be insane.

I think it is the generally accepted opinion of the profession that any act on the part of a person which tends to lower the physical and mental status of a person would contribute to a derangement of the mind.

I have been looking for something more definite than the hundred and one causes as given by authors in general and hope I have found it. One author whom I have consulted gives autointoxication as a cause in thirty per cent. of all cases of insanity, others less, but none more. I place it much higher, I should say than eighty per cent. would be nearer the mark. It is common to hear the laity or physician say that a case of insanity is inherited. We should say that they inherit a weakness or tendency to the disease or, if my theory is correct, inherit a tendency to the manufacture of toxic elements, in the same manner as certain persons inherit a tendency to the formation of calcerous deposits in their joints or worse still, stones in the kidneys or elsewhere.

We in all probability take into our bodies about the same approximate amount of the sulphate of lime in the water which we drink, but some of us are able to eliminate it, while others are not so fortunate. In opposition to the theory that religious excitement, over-work, business cares and the like are causes of this disease, I have to say that they are only secondary or contributing causes.

If a person goes to church or business and takes a healthy brain, and blood that is not charged with poisonous elements with him, it makes little difference how much the excitement or how great the strain; he would only suffer a fatigue.

If such causes were primary in nature our Wall street brokers would go insane in a short time.

That some such poison is produced, and is a cause of this disease I am practically certain. I have sometimes thought hereditary syphilis a factor,but to prove such an idea is very difficult.

It is an old story that scrofulous constitutions are due to an inherited or modified syphilis and if that is true we have just as good grounds to claim that it is a cause of insanity ,and if that theory were true my toxic idea could in that way be supported to a certain extent.

I wish here to say that this paper is one entirely of theory based upon close observation. The idea is thrown out with the hope that brighter minds may take it up, and eventually solve this great problem. I trust, if my position is not tenable, that the discussion which is to follow will so thoroughly explode my theory, that I may need give it no further thought, and that some other and better explanation will be given.

No doctor can afford to be indifferent in the filling of his prescription.

NEW YORK ACADEMY OF MEDICINE.

Section on Orthopaedic Surgery,

(Meeting of March 20, 1903.)

DR. T. HALSTED MYERS, CHAIRMAN.

Dr. W. R. Townsend presented the following patients:

Case I. Female child sixteen months of age with a marked rotary lateral curvature to the right of the dorsal region. The mother noticed a well marked deformity when the child was between three and four months of age and says it has not increased rapidly. The child is well nourished and presents symptoms of rachitis—enlarged abdomen, fontanelle not perfectly closed—enlarged epiphyses and rachitic rosary.

Dr. Townsend showed a frame which is used at the 42nd Street Hospital to keep these cases in a recumbent position, as the children are too young to permit of much being done in the way of exercise or manipulation, and the mothers cannot handle them conveniently in plaster of Paris jackets which soon become soiled.

Case II. A boy aged eight years who was shown to the section when he was two years old. At that time there was present a poliomyelitis of the muscles of the abdomen and body, causing a well-marked lateral curvature to the right as he was unable to maintain the erect position. He was under treatment ever since and has been kept flat on back. Has been given massage and passive movements in an endeavor to develop the muscles and for past six years has worn a plaster of Paris corset. His spine is nearly straight and is held so largely by the shape of his ribs. The power of the abdominal muscles—the recti, external and internal, oblique and transversalis, has never been regained. The chest is flat and the right scapula projects very markedly.

This case is interesting, as it has been followed up for a series of years. He has never had pneumonia, pleurisy or any other disease.

Case III. A girl aged 10, with general rachitic deformities—lateral curvature to the right in the dorsal spine, bow legs, curvature of femur, anterior curvature of tibias-coxa varacubitus varus. Supra condylar osteotomies have been performed, and the bow legs have been corrected. For the spinal curvature solid plaster jackets have been applied and the curve is less marked to-day than it was when first seen several years ago.

Reference was made to an article by Dr. Hoffman, of St. Louis, showing the normal position of the arms. The cubitus varus in this individual was very plainly shown by contrast. Dr. Hoffman has done a wedge-shaped osteotomy on the lower end of the humerus, and it might be done in this case.

Case IV. A girl nineteen years of age with lower dorsal Pott's disease of one year's duration. The kyphosis is well marked and curvature of the spine in the affected region to the right.

This case illustrates the fact that medical knowledge is needed in the application of muscular exercises for the correction of curvature of the spine. Had exercises been insisted upon instead of the application of the plaster jacket, an immense amount of harm would have been done. The treatment

for Pott's disease is absolutely different from that of lateral curvature, and it is important that the difference in diagnosis be recognized.

Dr. Whitman presented cases of typhoid spine.

Case I. This case was treated last August in the Presbyterian Hospital for typhoid fever. The fever ran the usual course and the patient was discharged in September as cured. It was supposed that on the 15th of October he fell and hurt himself. He had pain in the spine, well-marked posterior curvature and rigidity of the lumbar region. Could hardly walk. Was at the Hospital for the Ruptured and Crippled for three weeks, and was told then that he had Pott's Disease, early stage. Diagnosis of typhoid condition was made later. A plaster of Paris jacket was applied, worn three months and cure resulted.

Of sixty or seventy of these typhoid spine cases, only six have occurred in childhood.

Case II. This is a case of combined tendon transplantation and arthrodesis following anterior poliomyelitis. The tendon of the proprius hallucis is inserted through a hold bored in the scaphoid bone. Then arthrodesis is performed at the astragals-scaphoid point to make the effect more permanent. The operation was done last September. There is a good dorisflexion. In many of these cases the toe cannot be raised. Here it can be.

Case III. On the 21st of July, 1901, this patient came to the Hospital with osteomyelitis involving the knee-joint —almost rectangular flexion. Forcible correction was performed. There is now a much more useful amount of motion, 10 degrees from 170 degrees to 160 degrees than before the operation was performed, when there was complete ankylosis. If found impossible to completely extend the limb,it is well to supplement the operation by osteotomy. In these cases there is a slight tendency toward flexion, which must be resisted by massage. These tendons have been divided, yet the patient has good power of flexion.

Dr. Homer Gibney presented a case of congenital lateral curvature. Nothing in the way of treatment had ever been done. The mother thinks it has grown less as the child has grown.

Dr. Virgil Gibney presented a case illustrating the difficulty of making a differential diagnosis between lumbar Pott's and osteosarcoma of the spine. In 1900, the patient presented signs of lumbar Pott's. Jackets were applied and gave relief and perfect fixation. but persistent and acute pain on the slightest provocation remained. There was loss of power in the limbs and disinclination to walk or move about. These symptoms persisted for a year. In 1901, symmetrical abscesses on either side of the spinous processes were noted. Aspiration was resorted to with negative results. The surgeon in charge declined to do laminectomy.

Early in 1902 he was seen again. He then had markedly increased gibbous tumors on either side of the spine like old-fashioned saddle-bags, very hard. The patient was in a desperate condition, and taking opium. On February 8th, 1902, an incision was made into the mass and a handful or two of broken down vertebræ and grumous material taken out; no pus at all. The cavity was packed and closed. The pa-

tient was very weak—artificial respiration was used for a while. Then he was given Coley toxines.

Dr. Brooks, Pathologist, reported as follows: "Giant cell sarcoma, highly vascular made up of fibroblasts among which a good many plasma cells. Areas of pigmentation, probably from local hemorrhages. Probably originated from bone or periosteum. Serum treatment begun February 18th, 1902, and stopped May 15th, 1902."

The X-Ray was not used as the diagnosis proved to be correct. He now seems to be practically well.

Dr. Elliott presented a case of wasting disease for diagnosis. The patient is now three and one-half years old. There is great tenderness of the surface of the body. About six months ago, Pott's disease was suspected on account of the attitude of the child, pain and partial paralysis of the lower extremities, and a plaster jacket was applied. The jacket was worn for three or four weeks with no evidence of improvement. There is now no rigidity of the spine and no deformity, but a certain amount of paralysis,—drop-foot,—and great tenderness about the hip joint on both sides. Very exaggerated reflexes of both knees. There are well-marked evidences of rachitis, but that diagnosis would not explain all the symptoms,—the drop foot, continuance of pain and exaggerated reflexes. Poliomyelitis is thrown out on the ground of the exaggerated reflexes.

Dr. Halsted Myers presented the following case:

E. F., four years old. Double congenital dislocation of hips. Congenital deformities of toes also. April 1st, 1900, with the assistance of Dr. Shoonmaker, the right hip was reduced and put up in a spica with 40 degrees of abduction. He was soon allowed to walk with a high shoe on the opposite side. In November of the same year, a splint was applied to maintain the abduction and in December the result was considered perfect. The other hip was then reduced, with difficulty, and a spica applied with 60 degrees abduction. This, later on, was replaced by the abduction splint. In the summer of 1902, two and one-half years afterward, an abduction splint was worn again for a while on the right side as there seemed to be some prominence of trochanter and the boy was very wild.

X-Ray examination now shows both hips firmly in position. Limbs are of equal length, no limp. Normal motion, no pain.

Dr. Myers stated that he had been unsuccessful in putting up both hips at once, so in this case he put up one, then the other. The time required is a little longer than by the usual method. The X-Ray plate showed marked deformity of the head and neck of the right femur, and acetabulum somewhat undeveloped. The boy has now gone about a year without any protection and may be considered cured.

Dr. Napier: Report of an operation for the relief of the deformity following cerebral hemiplegia:

J. O., male, age 14 years. At 17 months had cerebral hemiplegia, attended with convulsions. Frequency: Often four or five a day. Lately one or two at night. The mental powers were considerably weakened, so that an æsthetic rather than a functional result was expected from an operation

The left arm and hand exhibited spastic contractures, with elbow slightly flexed; forearm pronated, hand and fingers flexed, thumb abducted—no power of supination. With considerable effort he could, by flexing the fingers, extend the hand, or extend the fingers with the hand flexed; and distal phalanx of thumb could be extended. The left foot was held in talipes equino varus. Operation at Kings County Hospital, April 15th, 1902. The attachment of the pronator radii teres was changed according to the method of Tubby. The hand and arm was held in the overcorrected position with plaster of Paris for six weeks. On removal, the arm was held naturally, but still no power of supination. In June the second step in the operation was performed. The tendons of the palmaris longas, and flexeres carpi radialis and ulnaris were divided near their insertions and passed through the interosseous membrane just above the pronator gradratus. The extensor communis digitorium tendon was shortened by doubling, and the radial and ulna flexors were inserted into it and attached by guilted silk suture. The tendon of the extensor secundi internodu pollicis was in the same way shortened and the palmaris tendon secured to it. The tendon of the flexor longus pollicis was then lengthened by Z shaped incision. All the suturing of tendons was done with fine silk and after scarifying the arm correction. After six weeks dressings was put up in plaster dressing in overwere removed. Wounds were healed by primary union. Unfortunately the boy was taken immediately from the hospital and sent to Craig Colony before a thorough examination was made. A report from there in January, 1903, showed the arm pronated, hand extended, fingers flexed, thumb adducted. Perhaps nothing better should be expected with after treatment neglected. Possibly even now condition might be improved with massage, electricity and muscle education. The attempt to change the pronator radii teres into a supinator evidently failed, probably owing to adhesions. It would seem better to remove dressings at end of second or third week for careful, passive manipulation. Nothing was done on the foot but a tenotomy of the tendo achillis and forcible straightening. The same principles of balancing the muscles by tendon transplantation should give beneficial results in the foot. This I have done but recently, but in a five year old child before the stage of deformity; here a slip from the tendo achillis was used to reinforce the weak peroneus longus and brevis and half of the tibialis anticus tendon was attached to the peroneus tertius and to the periosterum over the cuboid bone. In taking the slip from the tendon achillis it might be better to take from the internal border of the tendon. In this way the remaining portion would draw more on the outer half of the oscalcis, thus aiding eversion of the sole, which would be desirable. It would seem more rational to operate early in these cases before deformity has taken place, and thus hope to prevent it.

Dr. Brackett,of Boston, read a paper entitled: "Gymnastics in the Treatment of Lateral Curvature," with demonstration.

Dr. Brackett prefaced his paper by

remarking that its title might lead one to believe that he advocated the treatment of lateral curvature by gymnastics. This he disclaimed, stating that the paper was a brief discussion of some principles which might be used in the treatment of lateral curvature.

DEMONSTRATION:

Two cases were furnished by the Hospital for Ruptured and Crippled, and being unused to the exercises, showed difficulties encountered by the instructor.

This method of gymnastic exercises is practically indicated when, in cases beyond the ordinary light stages, it is desired to re-adjust muscular control of the individual, on the principle that in whatever position the patient exercises, that position tends to become permanent, and the more the position is corrected, the greater the ability to hold that position of correction.

The first step is to look at the child and see what its faults in position are, and what changes its flexibility will allow. Place it in as nearly correct attitude as possible, then train it to take a still better position, at first by simple "stretch exercises." Tell the child to make itself tall, and an improvement in position is at once noted.

Train the child to hold the spine in position and to raise and then bring the arms back to the side, and relax. Children at first try to make themselves rigid. Overcome that by telling them to raise the arms gently, at the side and to reach with the ends of the fingers.

Then place the child in a position impossible for it to take by itself. Tell it to stretch out and up and then push, getting a feeling of lift, then push it still straighter, and the position can be held for some time.

The next step is to give exercises on the side plane, without moving the back. In order to do this it is well to use as heavy a dumb-bell as possible, and maintain correct position. Then give ordinary push exercises.

The next step is to give exercises on the forward plane which disturbs the position of the back.

The next step is to give exercises which change the balance in standing, still maintaining the proper position of the back.

In doing this, it is well to use heavy dumb-bells, five, six or seven pounds. In using these dumb-bells, however, the difficulty is that bringing them down causes a tendency toward greater sag than before. It has been avoided by having an assistant stand near to take the bells away after being raised, but that means a great deal of help.

A device has been invented by the husband of one of the assistants working at the Hospital—an inverted bicycle pump, fastened to the ceiling. The child grasps the handle which is of any desired weight, and pushes it up, and then the suction of the pump greatly diminishes the weight of the handle as it comes down again.

This method of applying gymnastics to cases of lateral curvature can only be used in those where it is desired, not to develop muscular strength, but muscular control. It never can be used in classes; it demands an assistant's entire time. In those cases where it has been applied, it has given a good deal of satisfaction.

DISCUSSION OF DR. BRACKETT'S PAPER.

Dr. V. Gibney said that this line of

work he had not gone into much. He thought the training and position Dr. Brackett gave, not a very desirable feature in lateral curvature, although it had been tried in classes. Some cases were benefitted, others not. When not, plaster jackets, braces, etc., had been applied. He had talked with gentlemen in different cities on the subject and came home not very well satisfied with the results obtained. Dr. Brackett, however, had the reputation of being a painstaking, careful man, and the principles he had enunciated demanded respect. He believed an opportunity would be given before long of seeing further classifications taken up; Dr. Brackett had shown only one phase of the subject.

Dr. Teschner said he did not agree with Dr. Gibney that in cases of lateral curvature a certain number were benefitted and a large proportion were not, but believed everything possible should be done for them.

In regard to Dr. Brackett's first principle, (the increase of flexibility in the spine by forcible correction whether passive or active so far as the patient is concerned, by apparatus or by the hands of an operator, or the exercise of muscular power through the dictation of the individual patient) Dr. Teschner thought this flexibility very easily attained by proper exertion on the part of the patient.

He noted that in Dr. Brackett's efforts to place the spine of child on whom he demonstrated in a proper position, her right heel was raised two inches from the floor and kept there while the spine was straight. The spine was straightened by bringing the right side of the pelvis two inches higher than normal.

In regard to the weight coming down and causing sagging of the spine on the side where the deformity exists, experience had taught him that this was no danger at all. The greater the increase of curvature, the greater the flexibility of the spine. The reaction is in proportion to the intensity of the action. The patients cannot be exercised without due regard to symmetry and symmetrical action. The unequal muscles tend to become equal in length and strength, as lines on a spirited horse keep the head straight, by equal tension.

In regard to self-retention of correct position—the principle is an excellent one. It is, however, more difficult for the patient to attain than to maintain the proper position. Many of these patients are unable to mentally grasp what is required of them. When asked to do a task, it becomes necessary for them to attain a proper position before they can perform it; then they do it automatically, not with intent, and in a measure it becomes habitual and retention of the improved posture follows.

Dr. Teschner said he was opposed to forcible correction by the use of apparatus or plaster jackets, and thought more could be accomplished by rational gymnastic treatment; that it was, therefore, a waste of time to try other methods.

Dr. Brackett said that the way the children he presented did the work was not as he wanted it done—that he said before the demonstration, that their faults would show difficulties to be overcome.

He agreed with what Dr. Teschner had said in regard to principles except that a position attained by an indirect way does not help the patient to maintain the position desired, at such time as he is not exercising. He said he was not trying to make the children strong, but able to hold themselves properly all during their waking hours, and if they are forced to think of their position there will be a continuous effort of the will which in time will lead to permanent results.

DISCUSSION OF CASES PRESENTED.

TYPHOID SPINE.

Dr. Townsend quoted authorities who claimed that typhoid spine never occurred in young children. He said this was the first case he had seen under ten years of age, and it was interesting because typhoid fever itself was said never to occur in young children.

TENDON TRANSPLANTATION.

Dr. Dowd said the result is much firmer when the tendon has passed through the bone in this way than where other methods are employed.

Although in this case the long extensor of the toe is divided, still the power of extension of the toe is retained.

POTT'S DISEASE—SARCOMA.

Dr. Elliott said it was interesting to note the change in deformity: at first annular, then saddle-bag in shape, on either side of the spinous processes, then a return to the annular form.

Dr. H. Gibney saw the case when there was no deformity. A diagnosis of appendicitis had been made and the patient had been under medical treatment for that disease. He had noted a slight angular deformity. Dr. Virgil Gibney had not spoken of the incipiency of the case when there had been no deformity.

ANILINE DYES IN FOOD.

In a report to the Massachusetts Board of Health, *Druggist's Circular and Chemical Gazette*, February, 1903,) Analyst Leach says: "In the food and drug laboratory of the Board there is a varied collection of strips of woolen nun's veiling or albatross cloth originally white, dyed in a variety of fast colors by boiling up the pieces of woolen cloth in solution of various food products sold commonly on the market, illustrating in a striking manner the extent to which jellies, jam, ketchups, fruit syrups and cordials, especially of the cheaper variety, are so frequently colored. Reds, pinks and orange colors were dyed from preserved fruits and ketchups, a deep yellow from lime juice and a brillant green from creme de menthe. The latter cordial consisted of sugar syrup slightly flavored with peppermint and deeply colored with the aniline dye. It was completely decolorized by boiling with the wool for a few minutes. Various fruit and syrups are also commonly found with artificial color the coloring matter being aniline dyes in nearly all cases. The exact group to which the dye belongs may in most instances be identified by experiments with various reagents on the dyed fiber. Azoeosin has been found in raspberry and strawberry preserve; primulin orange in preserved quince; Bismarck brown in apricot, pineapple, etc; chrysamin in orange fruit syrup; malachite green in creme de menthe; dinitrocresol and tropeolin in lemon extract, etc.

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Editorial.

TOO MANY DOCTORS?

Dr. Billings, of national reputation, has taken occasion at the New Orleans Medical Convention to protest against an oversupply of medical men, which he says, the medical colleges are pouring forth into the country. He does not say that the public health has been increased by the superabundance of doctors, or that disease is disappearing. Dr. Billings confines himself to the elimination of the physician, rather than that of the ills and pains which call his profession into being.

"The country needs about 2500 medical graduates annually," said Dr. Billings; "and it produces from 10,000 to 12,500. The number of medical colleges should be reduced to 25 or 30."

There has been the same lamentation in the legal profession, in every line of activity. The bench and the bar have lamented the output of the law schools, yet how often do we hear of a lawyer taking the poor debtor's oath?

Why this regret of Dr. Billings? The law of supply and demand applies to the product of the medical schools as well as to the world of economics. The advances which have been made in surgery, in bacteriology, in the whole field of medicine, make it possible for more and more young men to investigate and probe and dissect, until new cures become possible.

Who are to carry on the work of medical research, the great foundations of J. D. Rockefeller and J. P. Morgan at Harvard and other universities, if there are not growing numbers of young men to be recruited from the medical colleges?

What has made a Koch, a Lorenz? Has it not been a desire to attain excellence, to rise above the competition of numbers, and give to the world a medical discovery?

For Dr. Billings to say that only 2500 new physicians are needed annually suggests a narrow professional vision. The country welcomes its young lawyers; thrice welcome to its physicians. May they do good work, even if they do not all make fortunes.

HILL'S REFERENCE CHART.

Our readers' attention is called to the advertisement of the Antikamnia Chemical Co's. in this issue. This chart is a valuable compendium of nervous diseases and like all the attempts of Mr. Ruf, the President of this Company, to aid the busy practitioner, it is meeting with remarkable success. Send your name for a chart and judge for yourselves.

Society Reports.

REPORT OF GYNECOLOGICAL CLINIC AT THE NEW YORK SCHOOL OF CLINICAL MEDICINE.

BY AUGUSTIN H. GOELET, M. D., PROFESSOR OF GYNECOLOGY AND GYNECOLOGICAL SURGERY.

GENTLEMEN.—The first case I show you to-day is one of more than usual interest because of the variety of conditions present, and because the question, "What may be done to cure this patient?" requires discriminating judgment. She is only 29 years old but has had three children and two miscarriages, the last being during the past year, and she is a complete physical wreck. If it were possible to get her away from her children and other household cares and build her up, it would be better to do that first before instituting any operative procedure for her cure, but in this class of patients such a course is not feasible.

Now what do we find on examination? We will first palpate the abdomen in the erect position and without difficulty we discover the right kidney prolapsed to the fourth degree and the left to the third degree,—quite enough to make an invalid of any woman—but there is more. Microscopic examination of her urine shows that there is already a pyelo-nephritis which is the result of the prolapse. Now that you have all been able to make out the prolapse of both kidneys to your entire satisfaction, we will place the patient in the recumbent position and again palpate the abdomen. You observe that the right kidney can be made out in this position without difficulty but the left comes down only to a limited extent on deep inspiration. In fact, if this patient was not so thin, it would be difficult to palpate even the lower pole of the left kidney, and unless we had examined her previously in the erect position, we would very readily overlook the displacement on this side. Examination of these cases only in the recumbent position is frequently the cause of failure to detect prolapse of this organ.

We will now proceed to examine the pelvic organs. You observe that there is a very marked cystocele with an incomplete laceration of the perineum, and when she is made to strain the cervix presents at the vulva.

This is badly lacerated also. Upon digital examination we find the uterus retroverted with complete relaxation of the utero-sacral ligaments. Without the support of these ligaments, the uterus will not retain its position in the pelvis. I regard them as the most essential support of the organ.

Now what shall we do to cure this patient? That is what she has come for and what she is entitled to. I will ask you all in turn what you would do for her if she consulted you in your private practice. You seem to hold a variety of opinions. One gentleman says he would remove the uterus to cure the prolapse. Would she then be cured? And would it be justifiable at her age?

Several operations will be required to effect a cure in this case, and if the patient was stronger they could all be done at the same time, but owing to her weak state I think it would be wiser to divide them, giving her ten days or two weeks between to enable her to re-

cover her strength. On the next clinic day at the hospital I shall fix first both kidneys, and after curetting the uterus I will repair the cervix. This will be enough for her to endure for one day. Then two weeks later I will repair the perineum and do a ventral suspension. This will keep her in bed about four weeks.

I shall not attempt any plastic work on the anterior vaginal wall to overcome the cystocele because when the uterus is drawn up and attached to the abdominal wall the vagina is drawn up with it and the cystocele will disappear. The result is more certain because the vaginal wall is now in a state of subinvolution.

The patient will be cured but the permanency of the result will depend largely upon the avoidance of pregnancy for at least five years.

The next case is also one of retroversion of the uterus with moderate rectocele. The patient is a widow, 38 years old, who was never pregnant. She complains of backache, bearing down pain in the pelvis, and menorrhagia. She has been treated with tampons before coming here and has worn a pessary without permanent benefit. She says when the pessary is worn it irritates, and menstruation is more profuse and prolonged. You will observe on examination that the uterus is freely movable and that it can be readily replaced but that it does not remain so. You will observe also that there is complete relaxation of the utero-sacral ligaments but the upper posterior vaginal wall is closely connected with the rectum and not separated from it and relaxed as you so often find in these cases of retroversion in women who have born children. The appendages are normal but there is a chronic endometritis and the uterus is large and heavy.

On my next clinic day at the hospital after curetting the uterus, I will do a simple operation in this case which I have under trial and about which I have thus far said very little. It is unique in its simplicity and in appropriate cases should prove very useful. Its object is to hold the cervix in the posterior cul-de-sac of the vagina and consequently in the hollow of the sacrum so the fundus will fall forward and the intra-abdominal pressure will be exerted against the posterior face of uterus. The technique is as follows, viz.:

The cervix is drawn forward and the posterior surface of the vaginal portion of the cervix is denuded of its mucous membrane. Then a corresponding surface of the same area on the posterior vaginal wall, well up in the posterior vault of the vagina is also denuded and these two surfaces are united by means of sutures. This attachment takes the place of the disabled utero-sacral ligaments and in those cases where there is not undue relaxation of the upper vaginal wall the result is very satisfactory.

In this case I will also narrow the lower part of the vagina by doing a posterior colporrhaphy because of the rectocele, but as a rule in these cases where this operation is appropriate this is not required.

The next case I show you has also retroversion of the uterus, but in order to effect a cure here it will be necessary to do a ventral suspension. The patient who is 28 years old has been

married nine years and has had three children, the last four years ago. You will observe in this case that there is complete giving away of the utero-sacral ligaments, and that the vagina is greatly relaxed and is but loosely attached to the rectum at its upper part, but the uterus is freely movable and can be replaced. Hence the operation that I would do in the last case, which I have designated "Posterior-Cervico-Vaginal Fixation," would not be appropriate here. Neither would shortening of the round ligaments be effective because these ligaments when shortened do not hold the uterus up in the pelvis though they may draw the fundus forward against the pubes. Hence, after this operation, the organ would sag down in the pelvis and we would have prolapse which would cause quite as much inconvenience as the retroversion.

Therefore, in this case, I believe a ventral suspension is the only positive means of cure. I do not hesitate to do this operation in appropriate cases when the uterus is freely movable, as well as when it is fixed, and during the child-bearing period, because the operation *per se* has no mortality, and when properly done it does not interfere with subsequent pregnancy.

Send us a report of your interesting cases. They will be of help to your brother physician. Use this journal as a medium of exchange of thought, and advance yourself as well as help advance others.

No doctor can afford to be indifferent in the filling of his prescription.

Medical Progress.

THE EFFICACY OF ANTISEPTICS IN THE TREATMENT OF CERTAIN CONDITIONS WITH SPECIAL REFERENCE TO THE MERIT OF GLYCO-THYMOLINE.

BY C. H. POWELL, A. M., M. D., PROF. PRINCIPLES OF MEDICINE AND CLINICAL MEDICINE, BARNES MEDICAL COLLEGE, ST. LOUIS, MO.

Ever since the introduction of Lord Lister's principles to the medical profession physicians have studiously and patiently investigated the many antiseptic agents introduced to their notice from time to time by different pharmaceutical establishments of recognized repute. Some of these preparations have not stood the test, and as a result "have fallen by the wayside." Others in proportion to their merits are filling an appropriate place in the prescription book. Of these there are but a very few indeed, and at the head of them all my experience induces me to place Glyco-Thymoline. This remedy, aside from possessing properties of a most positive nature is handled by the Kress & Owen Company in a most thorough, ethical manner. The Medical Press is selected by the Kress & Owen Company to the exclusion of all other mediums in order to keep the Glyco-Thymoline conspicuously before the profession. Not only that, but as a further evidence of the sincerity of the firm in believing their product all that is claimed, a liberal sample is sent any physician who may desire to test Glyco-Thymoline. Without going further into the merits of Glyco-Thymoline as an antiseptic possessing decided therapeutic properties, I desire to report a

few cases wherein by careful and persistent use this alkaline, alterative solution has given me most excellent results.

Case I.—Mrs. M. W., widowed, aged 42, consulted me for nasal difficulty for several months' standing. An examination of the nasal fossæ revealed several very interesting conditions. There were grouped together possibly seven or eight foci of ulceration, some of these spots ran together, presenting more or less of a serpiginous ulceration. Each ulcer was covered with a dirty,gray,ash-colored exudate which adhered firmly to the underlying schneiderian membrane. I first applied on absorbent cotton, a fifty per cent. solution of peroxide of hydrogen, and having removed the purulent secretion sprayed the nose thoroughly with a twenty-five per cent. solution of Glyco-Thymoline in distilled water. I instructed the patient to report the day following for a renewal of the treatment, and to my surprise found a healthy looking surface in place of the suppurating wound. I repeated the spraying of the nasal fossæ some three or four times more, and complete healing took place, the nose returning to its normal condition within a week's time from the first application.

Case II.—Mrs. F. K., married, aged 30, was brought to me for a disturbance of the throat, which owing to the fact of a member of the lady's family having recently died of tubercular disease, was a source of much worry and mental anxiety to both the lady and her husband. The tonsils were somewhat congested, and showed upon their surfaces several little points of deposits dipping down into the tonsilor crypts. I immediately sprayed the tonsils with a full strength solution of Glyco-Thymoline, and at the same time gave the lady a six-ounce bottle fifty per cent. strength to use as a gargle. In three days' time she called to get some more of the solution which she stated was very prompt in relieving her of her troublesome tickling sensation. Upon inspection I found the throat entirely cleansed of all exudates and the hyperæmic appearance of the tonsils were entirely removed, the gland assuming an almost normal hue. I again sprayed the tonsils with a full strength Glyco-Thymoline, and renewed the bottle for her, or rather requested her to have the bottle refilled at the drug store. She called again to see me in a few days and stated that she was entirely relieved of all unpleasant symptoms, and did not think further treatment was necessary. I accordingly dismissed her cured.

Case III. On the 21st of July, 1902, Miss N. McK. consulted me for considerable nasal irritation associated with sore throat, sneezing, and catarrhal discharge. She had been treated by a nose specialist in Chattanooga, Tenn., with very little evidence of improvement. An examination with the laryngoscope revealed the presence of chronic thickening of the larvngeal membrane, and a large cluster of adenoids filled the posterior nares descending into the larvnx. Operation on July 25th under chloroform anaesthesia the nares were completely cleansed of the foreign tissue, fifty per cent. peroxide of hydrogen solution was then used to flush out the cavity followed by a twenty-five per cent. solution of Gly-

co-Thymoline, (Kress.) The bleeding accompanying the operation was quite free, but immediately after the nasal chambers were thoroughly flushed out with the Glyco-Thymoline an arrest of the hemorrhage occurred. The nose was subsequently flushed out daily with Glyco-Thymoline solution, and a perfect cure resulted in about ten days from the first treatment.

Case IV.—Last May, 1902, I had a young society lady en route to Montana, who was sent me by Dr. Frank Jelks of this city for a critical examination of her lungs. A careful examination revealed the entire absence of any lung disease but the nares contained a polyp. The lady could not take any treatment but I advised her to have the polyp removed at the earliest possible moment, and as a local agent advised her to spray out her nose twice daily with a Glyco-Thymoline solution which I ordered for her at once. I lost sight of this case until near the middle of July, when I learned that she had never submitted to an operation for the removal of the polyp but had used carefully and persistently the spray I had prescribed for her, and having no further difficulty with her nose believed the polyp to be a thing of the past. She had not used the solution for over three weeks as she had no occasion to do so.

Case V.—A young man consulted me some three weeks ago for a sore throat, with larchrymation of both eyes, sneezing, and a great tendency as he expressed it of taking cold. An examination of both nostrils revealed great thickening of the mucoca, almost complete occlusion of the left side, and partial occlusion of the right nostril. The tonsils were very much hypertrophied, were hyperæmic in general appearance, and had a grayish deposit dipping down into the crypts. This case evidently, of grippal origin, demanded a prompt treatment to combat the Grippe Bacillus. For the treatment of this class of cases in particular I have derived the greatest benefit from the Glyco-Thymoline applications applied pure to the throat, and in twenty-five per cent. solution to the nares. A very useful plan is to flush out the nose once daily from behind forwards with the Glyco-Thymoline solution. This antiseptic can be used in weaker solutions but I greatly prefer the twenty-five per cent. solutions for nasal work, this strength having given me by far better results than weaker solutions.

In conclusion I desire to call attention to Glyco-Thymoline as an antiseptic demanding attention in the treatment of washing out the stomach. I wish to say that I have been using this efficient antiseptic to the exclusion of every other like remedy on the market. It not only is efficient as a germicide but is absolutely free from poisonous or irritating influences, and can be used in lavage with the utmost safety and freedom from possible bad consequences. I might enumerate a few cases in which I have used Glyco-Thymoline in the performance of lavage but believe I am already expecting too much of my readers to claim their further attention. If physicians are in doubt as to what antiseptic to use in practice give Glyco-Thymoline the first preference. It is prompt in its action, reliable in its field, harmless in its modus operandi. I regard, from my personal experience extending over a number of years, Glyco-Thymoline as being the

very best remedy of this class placed at the disposal of the medical fraternity.

THE CAUSE OF SLEEPING SICKNESS.

The announcement recently made by Dr. Manson (*Practitioner,* February, 1903) that the causal agent in the disease known as "sleeping sickness" or "African Lethargy" has at last been discovered is a fact of the first importance. This terrible disease, which affects the negro population in certain parts of Africa, has lately seemed to be enlarging its borders and spreading to regions which had been previously immune from it. The mortality caused by it among the natives has been enormous, whole villages being depopulated by the scourge. It is true that it is not the same thing to find the causal agent and to discover a cure for the malady, but the first step is to ascertain the pathology of the condition. The remedy will come later either in the form of a drug or, more likely, of a protective or curative serum. The morbid anatomy of this strange disease had been already ascertained by D. F. W. Mott, F. R. S., who found, in two patients who died at Charing Cross Hospital, that an intense inflammation existed in the substance of the brain, the vessels being everywhere surrounded by masses of migratory leukocytes. This appearance suggested very strongly the existence of an infective cause. The enlargement of the lymphatic glands, which also occurs, pointed in the same direction. The clinical symptoms consist of a gradually increasing lethargy, the patients not seeming to suffer any pain, but appearing miserable and resenting any attempt to arouse them. Great wasting lately occurs, and death takes place by progressive asthenia.

PARAFFIN IN FOOD.

It is said that among the sweetmeats now offered in the markets of New York (*Druggist's Circular and Chemical Gazette,* February, 1903,) is an alleged "butter-scotch" which consists mainly of glucose and hard paraffin. This dangerous fraud is not new here, as several years ago we happened on a recipe for a similar stuff in a journal devoted to confectionery. It was printed in answer to a correspondent who wanted to overcome the "stickiness" of a certain mixture, and it seems not unlikely that it was a type of others known to the trade. However that may be, our English cousins have practised the fraud for years, and it is reported that one of their manufacturing houses is now defending in court a charge against it of selling paraffined confectionery. Confections are not the only eatable things with which paraffin has been mixed. That great staple, rice, has been and perhaps still is "doctored" in that way, so as to make unsightly specimens appear agreeable to the public eye. The value of rice in dollars and cents depends somewhat on its appearance. When it is "bright" it brings the best price; when dull it is looked on as old and can be sold only at a lesser figure. Rice fresh from the fields may take a good polish when "milled," but when too old it is often dull and cannot be finished up to the market requirement by a mechanical process alone. To aid this, the grain is soaked in some kind of oil or in paraffin, mainly the

latter, it is said, and it can then be given a good luster. The danger in the ingestion of paraffin is a mechanical one; it is held by physiologists to be a wholly indigestible substance; if taken in even small amounts it may accumulate and cause obstruction of the digestive apparatus. Of course,no one with the slightest knowledge of the subject would allow himself to be exposed to such a risk; that it is thrust upon him is an outrage.

UNAWARE OF PREGNANCY UNTIL BABY WAS BORN.

A few days ago I was sent for in urgency to remove a placenta which had been retained *in utero* for a period of about three hours. The placenta gave me no trouble, but the story of the mother, who is a very respectable woman, took me by surprise. She informed me that her first baby, now 16 months old, was still on the breast; that she did not know that she was carrying a second child, and that about an hour and a half before the baby was born she felt a little uncomfortable, but had no pain. She thought that her discomfort was due to wind, and did not for one moment suspect anything in the shape of labor. Not until baby announced his arrival did she realize for the first time she had been pregnant. Her husband stated that he "heard no word of anything" till he saw the child. The baby was to all appearances a full-time child.—*Dr. E. H. Jones, in the Glasgow Medical Journal.*

This tallies very closely with a case under the care of the editor of the TIMES AND REGISTER recently, which was the case of a woman with her first pregnancy. She knew that she was pregnant but awoke one night at the sixth month, to find the child in the bed. There had been no pain sufficient to awaken her but a "bearing down" feeling the previous day. There was no hemorrhage and the placenta was easily delivered and recovery uneventful.

THE ST. CYR OBSTETRICAL TRACTORS.

The Net: The net is made of cotton, silk or other elastic fabric, and a thick, strong, non-elastic tape or cord is fixed at its upper end. The whole is prepared and treated like our surgical antiseptic gauze dressing.

The Instrument: The instrument is composed of two blades, having each an operating extremity, a shaft and a handle. Each operating extremity has the cephalic curve of the ordinary forceps and is 6½ inches in length. (Each blade is provided with an internal cavity for the purpose of each receiving one-half of the upper half of the net, allowing it thus to unfold from its center during application.) A groove or canal is for the purpose of receiving the thickened border of the net and tape, allowing the exit of the net through a very narrow slit, making it thus possible to remove both blades from the net and vagina at the will of the operator. The small lock is for the purpose of securing the blades together, their introduction is thus made easy. Lock is for the purpose of locking the instrument after the complete circuit of the head has been accomplished by the blades, thus securing the strong union of the net at the sacral curve. The shafts have the proper

curve to render as easy as possible the circumvolution of the operating blades or extremities around the head. When locked they give room for the passage of the outward extremity of the net, if downward traction is desired. The handles are fixed in the shafts; their lock is to secure the whole instrument ready for operation.

The Operation: The blades, with net inserted, are asepticized by boiling, locked, lubricated, introduced below the pubes, unlocked, circumvoluted to the sacrum, locked. The border is pulled tightly. Traction is then exerted at will on the net, not on the blades. To lock the blades after circumvolution, they may be pulled out slightly, locked and re-inserted.

When the head has reached the perinæum, by simple traction the blades can be removed, as they slip off the net, nothing holding them—they hold the net, and are not held by it. The net passes through a slit, which holds it firmly by its border, this border being made thick, so that it will not pass through the slit; thus it is that the net, by the continuance of its thickened border when emerging out and at the end of the slit, can be made to suit any size of head. By this arrangement it is seen that the operator has perfect control over the easy application of the net, its size, its adherence, its union, the direction of traction necessary in any given case, and the extraction of the instrument (either the applicating blades alone or both applicator and net.) By pulling on the inelastic, non-resilient, non-tensile border of the net from the outside world perfect control is obtained over the most internal parts of the net at its distant end, above the great convexity of the head; it is not necessary to pull directly on the non-elastic border of the net to obtain the necessary constriction, simply holding the net steady and pushing on to the applicating blades is sufficient to accomplish the same result.

When the applicating blades are removed, then only can the net be removed; thus, without the blades, if the net is not removed, delivery can be helped or not as the attendant may deem best to help or retard it because of the head at the perinæum, he may want to prevent it coming too fast, so that no tear will occur at the outlet.

The force exerted by traction on the net is not in direct line with the cord forming the thick border of the net. It pulls on the side of the cord, at *right angles* to it, and therefore produces but very slight tension on its length; a fact which enables us to apply whatever force may be required during delivery, without the possibility of rupturing the border of the net.

The simple and cheap construction of the net, a piece of cloth with a thickened border, makes it possible to use it in but one case and then discard it.

The border of the upper part of the net may be made flat. Providing that it is made of strong tissue, the net need not be completely surrounded by a thick non-elastic border; at the top the net tissue need have no border, for, if the thick border goes up far enough, the head of the child, through its own size, will prevent the net from slipping. When the tissue has stretched as much as it can, it becomes non-elastic.

The net can be given a variety of shapes. Its border can be lined with a tape, besides containing a round cord;

the smooth surface of the net will allow the net to slide readily in the slit and render the border stronger. It can also be provided with two cords or thickened borders.

Many forms of applicators or blades, as well as many forms of nets, can be devised, but the essential necessities are, first, a slit for the proper control over the application, the size, securement of the net, and the extraction of the blades, and second, a net, elastic and strong, having a thick securing border, non-elastic in nature

By having the cavity in each blade retain half the net respectively, and, each, half of the tape or thickened border, the spreading of the net over the child's head offers no friction, no resistance, as the net unfolds itself from the cavities in which it is placed without resistance and as rapidly as the case requires, that is, as rapidly as the blades are circumvoluted around the head of the child. This cavity is not an absolute necessity, the instrument is smaller without it and applies the net just as well, for the blades are much smaller than those of the obstetrical forceps which are applied to the same parts for the same purpose.

The sliding of the net through either of the slits is at the command of the operator, for, by pressing on one of the can be made to slide in that blade alone at the will of the operator, by simply holding the non-elastic border of the net as it emerges from the other blade.

A Most Important Factor: By pulling on the net with any force, in any case, such traction will not increase the constriction of the upper border of the net as it passes above the greater convexity of the head of the child. The applicating blades come with the head as well as with the net, and the relative position of the net and blades is not changed at the point of constriction by simple traction on the net alone. To accomplish this constriction two methods only can be employed, and they are, to push on the applicating blades holding the non-elastic border of the net steady, or to hold applicating blades steady and pull on non-elastic border of net; the pulling of the net alone does not increase or diminish that constriction any more than in the whole net, which, of course, contracts some, but evenly, in all directions; a fact which makes this method of delivery most acceptable.

By pulling on different portions of the protuding net, control over the coming head is obtained and errors of position are corrected, an act which, when attempted with the forceps, makes them serve as powerful and most dangerous levers. There is no doubt that, with the forceps, we often pull, without being well able to detect it at first, upon a head which is anchored at the symphysis pubis, and we pull in vain, with dangerous results to the mother and child; with this method, the cone-like shape of the net finds the proper path which the head has to travel without any possible danger of anchorage.

In face and occipito-posterior positions, the control over the motions of the head is such that extension can be performed immediately, the chin passes under the pubes, and instant relief is given at the perinæum.

The stretched net, when pulled upon for extraction of the head, forms a conical shaped protrusion, having its base at the circular border of the presenting

head and its apex at the hand of the operator, forming thus a soft but wedge-like shape, helping in dilating and preparing the maternal parts for the passage of the coming head of the child, without any possible danger of injury. This soft cone formed by the net will not only assist delivery, but will not injure the mother's parts and ruin her health for life, as the forceps so often do by producing fistulous openings leading from the vagina into the bladder or into the rectum and allowing the contents of these organs to pass into the vagina, sometimes all through a miserable existence. The perfect continuity of the surface of the net cannot take off or tear off the child's ears or nose or disfigure him for life as do the forceps by their fœnestra.

The evenly distributed pressure of the net moulds the head of the child; therefore the even and non-interrupted pressure, by its very diffuse nature, not only helps in obtaining a firm hold for the purpose of traction, but also accomplishes that which nature never fails to accomplish, namely, the even moulding of the head of the child to conform its shape to the different parts of the maternal passage by applying a widely diffused pressure.

The applicating blades must necessarily conform in shape to the mother's parts as well as to the child's head. The slit may be placed longitudinally in any part of the applicating blade, at its top, bottom or sides.

To apply the net it is not absolutely necessary to introduce the applicating blades deeply at the symphysis pubis and circumvolute deeply with blades all inserted as far as they will go; all that is necessary is to introduce the net with the aid of the blades for a distance sufficient so that the net will be placed and left at a part of the convexity of the child's head where it will not slip off, and then by continuing the circumvolution (not deeply) around the head until the sacrum is reached, then the blades must be introduced deeply. Thus, the blades being situated deeply and the point of resistance (exit and resistance of the net) being at their extreme end, by pulling on the non-elastic border of the net, it will be seen that the upper part of the net, which was not deeply applied at first, will thus be brought down in position over the head of the child in its proper place just as well as if the head had been circumvoluted deeply in its whole length by the blades; this is not absolutely necessary, as the blades, being smaller than those of the ordinary forceps, can be passed between the maternal parts and the child's head with greater facility, but by this method considerable anxiety and pain to the mother is avoided.

The blades, being at the perinæum, afford us a means of protecting that part and prevent its tearing; for, being much smaller than the blades of the forceps, they take but very little room and can be made to offer a firm resistance to the advancing head. They have the proper flat surface and curve to rotate the head upwards instead of downwards toward the perinæum as nature often does with injurious consequences; it does away with that resultant bagging condition at the perinœum which is so often the cause of most severe tears.

The position of the forceps, being edgewise, helps to produce tears of the

perinæum, while the flat surfaces of these blades help to protect it.

The shafts may be made flexible, to facilitate the application of the net, especially for the high operation. They may be jointed, so that the operating extremities of the instrument may be placed at whatever angle desired for the proper application of the net around the head of the child. Of course this must not be flexible edgewise, for in that direction the applicator must be rigid.

The locks may be placed in a variety of positions; for example, at the internal edge of each of the operating extremities of the applicator when the two blades are brought together after the circumvolution of the head of the child has been accomplished; of course they must be free from all sharp surfaces. They may also be placed in the concavity present on the under surface of the instrument at the point of union between the operating extremities and the shafts of the instrument. It may be made a common clamp, holding the rigid blades together and thus locking them securely.

Chicago, December 5, 1901.

TREATMENT OF TROPICAL DYSENTERY.

Frederick Goldsmith (*The Australasian Medical Gazette*) insists upon absolute rest to the body and to the intestinal canal. The diet should be left off altogether for a time, or be wholly fluid and as little as possible. Although the patient may be almost continuously on the stool, that which is passed is not fecal matter at all, but merely the product of the highly inflamed bowel. The feces tend to be locked up behind the diseased part, and to be retained there by the muscular spasm of the affected portion of the bowel, the lumen of which is still further diminished by the edema present in the mucous and submucous coats. To ensure the passage of the feces it is necessary to render them as liquid as possible, and for this the sulphates of magnesium or sodium are very suitable. The author usually gives one-dram doses every two hours, combined with a little tincture of opium, tincture of orange and chloroform water, till the motions become feculent, and then every four hours afterward for a few days. To render the diseased bowel aseptic as far as possible, and to destroy the disease-producing germ, injections per rectum are valuable when the disease does not extend backward beyond the descending colon. Methylene blue nine grains, and boric acid solution two pints, gives the most satisfactory results. The enema should be injected slowly, and if there be still any expulsive effort, the buttocks (which are raised on a pillow) should be pressed together till the spasm passes.

TREATMENT OF TYPHOID FEVER.

In an address on this subject, delivered before the North London Medico-Chirurgical Society, Dr. H. D. Rolleston (*Practitioner*, February, 1903) alludes to the question of the advisability of starving the patient, and thus reverting to the ancient method of treatment. He quotes the cases of some soldiers who suffered from typhoid fever during one of the sieges in the South African war. Pro-

visions were scarce, and the patients lived for some days on little but water. They did exceptionally well on this diet during the fever, but during convalescence they suffered from lack of sufficient nourishment. Typhoid patients appear to do well on little but water, with or without a small quantity of alcohol. With regard to the use of this drug for heart-failure, Dr. Rolleston speaks dubiously. He tends to prefer hypodermic doses of strychnine. For intestinal antisepsis he gives the palm to liquor hydrargyri perchloridi in half-drachm doses. With respect to the antityphoid inoculation as practised by Wright, the data do not admit of a certain conclusion being reached, but Dr. Rolleston's own observations tended to show that infection did not take place within six months of the inoculation, which therefore seemed to confer temporary immunity.

A CENTURY OF ARM-TO-ARM VACCINATION.

Eduardo Liceaga (*Indiana Medical Journal*) describes the method of arm-to-arm vaccination, which has been practised for 100 years in Mexico, the greatest care having been exercised as to the choice of candidates for propagating the virus. As to the results, it has been observed, in the first place, that persons vaccinated in this way remain immune during their whole lives. When there is a widespread epidemic it is stopped in no time by at once vaccinating all persons who have not been previously so treated. The immunity which vaccination confers on infants is preserved during the whole of their lives. No Mexican physician has ever died of smallpox, even if he has been in practice for 40 years. The same immunity has been observed in male and female nurses who attended smallpox patients. Experiments undertaken by order of the Supreme Board of Health of the City of Mexico show that vaccinations succeeded exceptionally well. Of 1,307 revaccinations only 23 were successful.

HEART DISEASE.

That heart trouble is becoming the great American disease, and is gradually outstripping consumption in its victims, is stated in emphatic language by members of the Boston and State Boards of Health. There is a forcible warning against our continued strain of mental and moral energies in the Boston Board's assertion that during the past year the number of deaths from heart disease has jumped over 13 per cent. According to the mortality returns, the two tables of deaths from heart disease alone in Boston for the past two years are:

1902 1033
1901 963

In connection with this striking picture of the strain of our business life, Dr. Durgin, chairman of the Boston board, says frankly:

"There is no doubt that there is an increase in heart disease in its different forms, and I have no doubt that the strenuous life, led by our business and other active men, is a great factor in its increase."

The Massachusetts State Board of Health tells a more alarming story of the tremendous headway heart diseases

are making in our life. The startling statement is made by this Board that during the past half century deaths from heart disease have risen 335 p. c. In the total number of deaths in the entire population heart disease has gone up from 2.76 p. c. in 1853, to 9.3 p. c. in 1901. The increase for one year was nearly 1 p. c. of the total deaths.

The State Board has looked into this showing with the greatest care, and the more significant the warning which they give. Heart disease mortality tables for the past fifty years show these percentages in the total number of deaths:—

1853	2.76 p c.
1895	7.5 p. c.
1897	8.2 p. c.
1898	8.6 p. c.
1899	8.8 p. c.
1901	9.3 p. c.

In view of these figures, Dr. Abbott, secretary of the State Board, says without qualification:

"The strain of our competitive life is a great factor in the increase of diseases of the heart."

One of the more frequent forms of heart disease is the nervous or functional disorder, and of this Dr. Abbott says that this is due in a great measure to a lack of exercise. Of course, the health returns of 50 years ago were not as accurate or complete as those of today. Formerly, too, a few minor diseases, which are now classified under heart disease, were recorded in their own specific form. However, these modifications of the lesson which is taught by the statistics of heart disease are slight, and do not change the warning, old and oft repeated, that we are living too much on heart energy. Philosophy and preaching may be ignored, but the vital statistics can not. They say to the business man—"Look out for danger!"

INSOMNIA.

The following is an outline of treatment of insomnia due to the various causes as suggested by the *Month. Encyc. of Pract. Med.*: In insomnia from pain, morphin, the coal tar products or large doses of chloral are indicated. Insomnia from reflex irritability, chloral, trional, sulphonal, are the best. When it is due to delirium or chronic insanity, hyoscyamin combined with morphin. And when there is loss of sleep from nervousness and worry, the bromids should be given in doses of twenty to thirty grains (1.30-200) three or four times daily. One must be bear in mind that chloral depresses the medulla and is at times dangerous to the heart, lung, kidneys and stomach.

DRAGGING CHILDREN BY THE ARM.

A physician was the other day discussing some of the ills from which children suffer, and in the course of the conversation a number of interesting points were brought out. "I am of the opinion," he said, "that a great many of the deformities and weaknesses of children are caused by the dreadful habit that some grown people have of taking small children out to walk and dragging them along at a fast pace.

"Only a few days ago I saw a man

taking a child not over four years old along the street. He was holding the little one's hand and walking at his usual gait. The child jumped, ran and stumbled along, frequently losing its feet, and being brought up to the perpendicular by a jerk of the arm. The little creature got white and exhausted looking, finally began to cry, but the man seemed insensible to the fact that he was doing an unwise and cruel thing, and scolded and coaxed the little one on as best he could. He had nothing to carry, and might just as well have taken the child up, but perhaps he did not think of it, or if he did, chose not to do so. I had a little curiosity to keep track of them; and when the man stopped, as he shortly did, I stepped in and spoke to the little one. Her father was busy and paid no attention to me. The child's temperature was at fever heat, and every nerve and fiber of the little body was quivering from the overstraining of the muscles. If that child doesn't have an attack of rickets or some kindred trouble, I shall be very seriously mistaken in my estimate of the injury it received in that dreadful dragging over a rough walk.

"I had in my charge at one time a child who had almost lost control of the muscles of one of the legs, a difficulty brought on, I firmly believe, by the habit the other children had of hurrying it along in order to keep up with the other youngsters with whom they were playing. They had strict orders not to leave the baby or to let go its hands, and as a consequence it was dragged and pulled along in the most frightful fashion. I believe that a great many cases of rickets are brought on by this habit of pulling children by the arms. It necessarily is a strain on the spine and must be productive of unpleasant if not dangerous results. I think that the attention of all intelligent parents should be directed to this subject and that the strictest orders be enjoined on servants and all care-takers of children to avoid a practice that in the nature of things must be injurious, for that is to my mind without doubt the cause of many hunchbacks and many deformities."—*New York Ledger.*

STRANGULATED HERNIA AT TWENTY-SEVEN DAYS OF AGE.

Dr. L. W. B. Reed (*Medical News*) described a case of strangulated hernia of a child of twenty-seven days, followed by successful operation and recovery. This is the youngest case on record. There have been over 100 cases of children under one year of age reported for operation for strangulated hernia, and a prognosis of the operation depends on the length of time that the strangulation has been allowed to continue and on the damage that has been done to the tissues by taxis. No operator need to be afraid to take these cases in the ordinary surgical way, and no physician is justified in delaying recourse to surgery until the prognosis is bad.—*Archives Ped.*

Note: This is not the youngest case on record. Dr. F. S. Parsons, of Boston, operated a similar case in a child fourteen days old with successful operations, some six or seven years ago.—*Ed. T. and R.*

No doctor can afford to be indifferent in the filling of his prescription.

COUNTRY SURGERY.

BY F. E. BURGEVIN, M. D., SPIRO, I. T.

Reprinted from *The Surgical Clinic*. March, 1903.

Having been requested to furnish some notes of my surgical cases for the *Surgical Clinic*, I respond with pleasure to the call of duty, a labor of love, as it were. Here at Spiro in the Indian Territory, we do not possess the same facilities for operating as are enjoyed by the surgeons of Chicago, but excepting a few victims of railroad accidents who were promptly shipped to the railroad hospital at Kansas City, under care of the chief surgeon, I have not had to send away many surgical cases. As a rule we do our own surgery, and while we cannot show as brilliant results as Senn, Ochser or Morris, we "get there just the same." I have not yet been so unfortunate as to lose one of my surgical cases. Of course that is more luck than skill.

I will illustrate by a few emergency cases just how we do our surgical work, that the younger and more timid brethren may take heart. Remember we have not the resources of a hospital to fall back upon, and are not overburdened with instruments or appliances.

Case I. Purulent hepatitis. Mrs. T., 29, one child, 4, for three weeks has been under the care of another physician, who had diagnosed appendicitis and advised an operation, which was refused. I found a large tumor in the right hypochondriac region, eighteen inches in circumference, reaching from the upper edge of the liver to within one inch of McBurney's point; firm, symmetrical, tender on pressure, no discoloration or fluctuation, considerable pain not entirely relieved by opiates, temp. ranging from 102 to 103.5, pulse 100 to 112, face flushed and anxious, history of chills and fever, with gradual onset of present symptoms complex.

Diagnosis, abscess of the liver, by exclusion. She grew steadily worse in spite of our efforts, and they consented to an operation. My associate and I put her under chloroform, and an explanatory incision was made the full length of the tumor, about five inches, dissecting down to the abscess cavity, through the superimposed tissues, feeling our way, so to speak, as we both realized that we were treading on holy ground. However, the abscess, which originated in the superior lobe of the liver, had been pretty well walled off from the peritoneal cavity. We evacuated about a quart of greenish pus, then attaching a small nozzle to a two-quart fountain syringe we scoured out that same cavity, first with a gallon of plain hot water, then with a hot solution of Hydrozone, which was continued until foaming ceased. The cavity was then packed with iodoform gauze, the wound brought together with catgut, leaving an inch open at the lower end for drainage; the edges cleaned with pure Hydrozone, then dusted thickly with boric acid. Gauze and a bandage completed the dressing.

The alarming symptoms that presented were met with hypos of glonoin and strychnine. Calcium sulphide was given a free hand from the beginning. We removed the gauze on the third day, repeated the washing with hot solution of Hydrozone and dressed as before; not a drop of pus was seen after that, and healing was rapid. She

had no more pain or fever after the operation, and made a record-breaking recovery.

Case II. Boy 15, jumped off a train while in motion and was thrown against a side track, cutting a deep gash in the forehead over the right eye. An hour later I found him comatose, pupils contracted, insensible to light, pulse thready and fluttering, considerable hemorrhage. Strychnine and glonoin brought about reaction, the wound was carefully cleansed according to my usual method with Hydrozone, stitched together and dusted over with iodophyll. Reaction was met by a cold hood, aconitine and eliminants. The boy was soon well.

These cases are taken in the order as they occurred, and seem to show what we have been doing in this line recently, and how we country practicians handle emergency work.

In another report I will give an account of some of our surgical procedures for the relief of chronic diseased states, and what we have been able to accomplish in that direction.

DIET IN CHRONIC ENDOCARDITIS OF CHILDREN.

Thompson, in *Pract. Dietetics,* states that children who have chronic valvular disease or enlargement of the heart, but who are not strictly confined to bed, should have their habits of eating closely guarded. They should eat slowly and moderately and at regular intervals, the heavy meal should be at noon, and a light supper two hours before retiring. Animal food is as a rule better for them than vegetables, but they may be allowed fresh vegetables, such as spinach, tomatoes or stewed celery. Rice and macaroni may be given. Sweets are liable to cause flatulency and palpitation and excite the heart's action and produce unnecessary strain.

Von Leyden has treated a number of cases of scarlet fever with the serum of convalescents, injecting at first small doses and subsequently always 20 cc. Altogether 16 patients were so treated. Of these 16 patients, 13 are completed observations. Three were improved; 9 were slightly improved; and one was improved, although the diagnosis was doubtful. The remaining 3 were greatly improved. One showed a lytical fall in the temperature immediately after the injection, and the other 2 patients showed a critical fall in the temperature. There were no injurious effects of the injection of even 40 cc. of the serum. It should probably be injected as early in the course of the disease as possible.

Ethyl chloride gives perfect anesthesia in man as in animals. Its action is rapid, the excitement slight, there is no reaction, and the return to consciousness is instantaneous. Therefore, care is necessary to continue the anesthetic until the operation is over. As very little air should be inspired, a good apparatus is needed. It is to be preferred for minor operations, since it is not followed by nausea or vomiting. It does not irritate the larynx, but may produce renal, hepatic and cardiac lesions. It may be given first, followed by ether or chloroform, with good results.

Therapeutic Hints.

AN OLD FRIEND'S ENDORSEMENT.

In the "Reference Book of Practical Therapeutics" compiled by our old friend, Frank P. Foster, A. M., M. D., editor of *The New York Medical Journal*, we note the following:—"Antikamnia Tablets have been much used and with very favorable results in neuralgia, influenza and various nervous disorders. As an analgetic they are characterized by promptness of action, with the advantage also of being free from any depressing effect on the heart." We are pleased at this expression of faith in the efficacy, promptness and absence of untoward after-effects of this most excellent remedy. We feel that the statement applies not only to Antikamnia Tablets, but to any of the tablet specialties offered to the medical profession by the Antikamnia Chemical Company, of St. Louis, Mo. Physicians desiring samples should write to this Company for them and they will be forwarded promptly, particularly if they mention MEDICAL TIMES AND REGISTER.

NOT OPIATES BUT ANTIPHLOGISTINE.

Pain is the greatest instrument of torture with which the practitioner has to contend. It is the one symptom to which the laity attach the utmost importance. Absence of pain is to the patient always suggestive of improvement. Its presence, especially in uterine affections, causes apprehension of operation, and for relief of those cases who will not submit to operation and in inoperable conditions, Antiphlogistine strongly recommends itself, not only as a palliative measure but an excellent remedial agent. This fact has been successfully demonstrated by the gynecologist. Its value in acute and chronic conditions of the ovary and uterus is prompt, permanent and certain.

Two different methods of application are permissible, each exercising a distinct function in therapeutics.

During menstruation the introduction of any medicinal agent into the vagina is contra-indicated and at this period the pain of catamenial irregularities can best be controlled by applying Antiphlogistine over the abdomen warm and thick and covering with cotton and a compress. This practice persisted in for several periods prevents headache, lumbar pain and other vicarious concomitant symptoms. Many women who have been physically incapacitated for a day or two each month have been permanently relieved by systematic use of Antiphlogistine at each menstrual illness. A potent influence is exerted over the sympathetic system which is so intimately associated with the physiological functions of the uterus that efferent stimulation neutralizes afferent irritation.

In the interval between menses, Antiphlogistine is successfully applied to the cervix of the uterus in the following manner: Make a small gauze sack and fill it with Antiphlogistine slightly larger in volume than the ordinary cotton tampon. Tie a string around the improvised sack and pass the Antiphlogistine tampon with dressing-forceps through the vaginal speculum to the os of the uterus, molding around the cervix. Through the induction of

osmosis and dialysis of inter-cellular fluid, intra-mural tension is quickly reduced, local analgesia and undisturbed cervical drainage follow. For relief of a patulous uterus the indurated cervix of endometritis and all irregularities of menstruation including amenorrhœa and dysmenorrhœa, this treatment is far superior to the ordinary glycerine tampon, rendering marvelous results to the clinician and patient.

Dawbarn, in amputating, twists all vessels too small to have a name. For vessels large enough to have a name he ties, using either "granny" or "reef" knots, and he ties three times instead of the usual two. For the main arteries he uses a suture-ligature and ties gently the first half of the friction knot. The tourniquet is then removed, and the ligatures tightened if necessary, after which the knot is completed. He gives some points concerning the anatomical guides for ligation of various arteries, and describes a kind of ligation forceps which resemble the ordinary Wells hemostat, excepting that the jaws are turned nearly at right angles to the handle. After gently working its blunt point around the artery, the jaws are opened and the catgut seized and withdrawn, after which it is used as a tractor until the knot is tied.—*Annals of Surgery.*

Book Reviews.

A VALUABLE WORK.

We are in receipt of a work on General Paresis by Dr. Robert Howland Chase, A. M., published by P. Blakiston's Son & Co., Philadelphia.

In the preface to his work this eminent authority on nervous and mental diseases, remarks the lack of knowledge among general practitioners, of the details of this now prevalent but little understood disease.

It is to assist this branch of the profession—the general practitioner—that the work is compiled, the author's object being to lay before them, as clearly as possible, the special features of the disease, a dread malady which claims its victims from every walk and station of life.

Remembering that on the family physician devolves the care of these cases at the onset, and on him rests the responsible decision of diagnosis, it is all important that his knowledge of the disease should be sufficient to avoid errors in early treatment, since so much may and does depend upon it. That there is a meagreness of such knowledge is only too evident to those who have frequent intercourse with the general medical practitioner, and the cause of this limitation of knowledge is found in the fact that while the current literature on this subject is voluminous, it is scattered and not in a form to meet the needs of the busy physician. It is to meet this condition that Dr. Chase has given to the medical profession this most valuable hand book, which lays before them the practical results of his own wide experience and

research, without any attempt on his part to settle scientific questions that are still in dispute by investigators; or attempting to advance original views and individual opinions beyond those demonstrated in his own life work as a specialist in nervous and mental diseases.

In a volume of eighteen chapters the author takes up the symptoms and treatment of the disease from the very first indication of its approach, describing its various phases and illustrating its many stages; ending with a most complete chapter on Prophylactic Treatment, Treatment of the Established Disease, General Medical Treatment and Treatment of Special Symptoms.

The book is one that no physician with a responsible practice should fail to secure.

J. R. C.

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